Tyrosine improves cognitive performance and reduces blood pressure in cadets after one week of a combat training course.

Deijen JB¹, Wientjes CJ, Vullinghs HF, Cloin PA, Langefeld JJ.

Abstract

The effects of the amino acid tyrosine on cognitive task performance were studied on a group of 21 cadets during a demanding military combat training course. In addition, the effects on mood, blood pressure and the norepinephrine metabolite MHPG were determined. Ten subjects received five daily doses of a protein-rich drink containing 2 g tyrosine, and 11 subjects received a carbohydrate-rich drink with the same amount of calories (255 kcal). Assessments were made both immediately prior to the combat course and on the 6th day of the course. The group supplied with the tyrosine-rich drink performed better on a memory and a tracking task than the group supplied with the carbohydrate-rich drink. In addition, the supplementation of tyrosine decreased systolic blood pressure. No effects on mood were found. These findings suggest that supplementation with tyrosine may, under operational circumstances characterized by psychosocial and physical stress, reduce the effects of stress and fatigue on cognitive task performance.

PMID: 10230711 [PubMed - indexed for MEDLINE]